AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): An array refracting element comprising:

a refracting member which has a unit surface shape for dividing one light beam into two light beams by ejecting the one incident light beam toward different positions,

wherein the array refracting element is configured to arrange the two refracting members in pair units in an array shape in a direction orthogonal to a light beam dividing direction.

2. (original): The array refracting element of claim 1, wherein the unit surface shape is a shape for dividing the one incident light beam into different angular orientations and ejecting the divided light beams.

3. (currently amended): The array refracting element of claim 1, wherein the unit surface shape of the array refracting element is a shape for dividing and ejecting the one incident light beam so that an optical axis of the ejected light beams is parallel to an optical axis of the incident light beam.

4. (original): The array refracting element of claim 1, wherein the array refracting element is configured using optical glass.

5. (original): The array refracting element of claim 1, wherein the two refracting members are a first refracting member having a rectangular shape in plan view, and a second refracting member having, at one of a light beam incident side or a light beam ejecting side, a rectilinear sloped surface from one end to another end in the direction of the division of the light beam.

6. (original): The array refracting element of claim 1, wherein the two refracting members are a first refracting member having, at one of a light beam incident side or a light beam ejecting side, a rectilinear sloped surface from one end to another end in the direction of the division of the light beam, and a second refracting member having, at one of the light beam incident side or the light beam ejecting side, a rectilinear sloped surface from the other end to the one end in the direction of the division of the light beam.

7. (original): The array refracting element of claim 1, wherein the two refracting members are a first refracting member having at one of a light beam incident side or a light beam ejecting side, at least two rectilinear sloped surfaces from one end to another end in the direction of the division of the light beam, and a second refracting member having, at one of the light beam incident side or the light beam ejecting side, at least two rectilinear sloped surfaces from the other end to the one end in the direction of the division of the light beam.

8. (original): The array refracting element of claim 1, wherein the two refracting members are a first refracting member having, at one of a light beam incident side or a light beam ejecting side, at least two rectilinear sloped surfaces from one end to another end in the

direction of the division of the light beam, and a second refracting member having a rectangular shape in plan view.

9. (original): An array diffracting element comprising two refracting members, at least one of which is formed as a diffracting member, having a unit surface shape for dividing one incident light beam into two light beams,

wherein the array refracting members are arranged in a pair unit in an array shape in a direction orthogonal to a light beam dividing direction.

10. (original): The array diffracting element of claim 9, wherein the unit surface shape is a shape for dividing the one incident light beam into two angular orientations and ejecting the divided light.

11. (original): An exposure apparatus for forming an image on a recording medium by scanning exposure, the apparatus comprising:

a light source for ejecting a light beam emitted in a broad area for at least a main-scanning direction;

a condensing optical system for condensing the light beam emitted from the light source on the recording medium; and

an array refracting element which is disposed between the light source and the recording medium so that a direction, which two refracting members are arranged in a pair unit in an array shape, is substantially parallel to the broad area direction of the light beam emitted from the light source, wherein the array refracting element includes a refracting member having a unit surface

shape dividing one light beam into two light beams by ejecting the one incident light beam toward different positions,

wherein the array refracting element is configured to arrange the two refracting members in a pair unit in an array shape in a direction orthogonal to a light beam dividing direction.

12. (original): The exposure apparatus of claim 11, wherein the array refracting element is disposed at a position at which a far field pattern of the light beam emitted from the light source is formed.

13. (original): The exposure apparatus of claim 11 further comprising:

an inputting component for inputting resolution information showing resolution of an image formed on the recording medium by the scanning exposure; and

a moving component in which the array refracting element is removed from the optical axis of the light beam emitted from the light source when the resolution shown by the resolution information is a predetermined first resolution, and the array refracting element is moved so as to be placed on the optical axis when the resolution shown by the resolution information is a second resolution which is lower than the first resolution.

14. (original): An exposure apparatus for forming an image on a recording medium by scanning exposure, the apparatus comprising:

a light source for ejecting a light beam emitted in a broad area for at least a main-scanning direction;

a condensing optical system for condensing the light beam emitted from the light source on the recording medium; and

an array diffracting element which is disposed between the light source and the recording medium so that a direction, in which two refracting members are arranged in a pair unit in an array shape, is substantially parallel to the broad area direction of the light beam emitted from the light source, wherein the array diffracting element includes two refracting members, at least one of which is formed as a diffracting member, having a unit surface shape for dividing the light beam into two light beams,

wherein the two refracting members are arranged in a pair unit in an array shape in a direction orthogonal to a light beam dividing direction.

15. (original): The exposure apparatus of claim 14, wherein the array diffracting element is disposed at a position at which a far field pattern of the light beam emitted from the light source is formed.

16. (original): The exposure apparatus of claim 14 further comprising:

an inputting component for inputting resolution information showing resolution of an image formed on the recording medium by the scanning exposure; and

a moving component in which the array diffracting element is removed from the optical axis of the light beam emitted from the light source when the resolution shown by the resolution information is a predetermined first resolution, and the array diffracting element is moved so as to be placed on the optical axis when the resolution shown by the resolution information is a second resolution which is lower than the first resolution.

17. (new): The array refracting element of claim 1, wherein the two refracting members in pair units divide the same incident light beam being split in two directions.

18. (new): The exposure apparatus of claim 11, wherein the array refracting element comprises:

two refracting members in pair units that divide the same incident light beam being split in two directions.

19. (new): The array refracting element of claim 1, wherein when a resolution is 2-K0 (dpi),

$$W = \frac{(N-1)\times 2\cdot\varepsilon}{2} + \varepsilon = N\cdot\varepsilon$$

and wherein when the resolution is K0 (dpi),

$$W' = N \times 2\cdot\varepsilon$$

where: ε is a scanning line pitch of each light beam in a sub-scanning direction;

N is a number of light sources;

W is a feed pitch in the sub-scanning direction for 2•K0; and

W' is the feed pitch in the sub-scanning direction for K0.

20. (new): The exposure apparatus of claim 11, wherein when a resolution is 2·K0 (dpi),

$$W = \frac{(N-1)\times 2\cdot\varepsilon}{2} + \varepsilon = N\cdot\varepsilon$$

and wherein when the resolution is K0 (dpi),

W' Nx2 · ε;

where: ε is a scanning line pitch of each light beam in a sub-scanning direction;

N is the number of light sources;

W is a feed pitch in the sub-scanning direction for 2·K0; and

W' is the feed pitch in the sub-scanning direction for K0.

21. (new): The array refracting element of claim 17, wherein the two refracting members in pair units form adjacent members, said adjacent members are placed side by side in the direction orthogonal to the light beam dividing direction.

22. (new): The exposure apparatus of claim 18, wherein the array refracting element comprises:

two refracting members in pair units that form adjacent members, said adjacent members are placed side by side in the direction orthogonal to the light beam dividing direction.